

REMARKS

Claims 1-26 are pending in the application.

Claims 1-26 are rejected.

The office action indicates that claims 1-5, 9, 11-16, 20 and 22 are rejected under 35 USC §102 (e) as being unpatentable over Gottlieb U.S. Patent No. 6,4298,431. The rejection is respectfully traversed.

The applicants address a specific problem (register corruption) that occurs on certain machines (e.g., the IA64) during context switching. The method of claim 1 addresses this problem by “saving the context under software control using an inconsequential register; and preventing the processor from changing the context while the context is being saved.” Moreover, the method of claim 1 addresses the problem without modifying the CPU architecture.

Gottlieb relates generally to thread switching in multi-threaded applications and specifically to saving a current thread’s state in system memory so it can properly resume later (col. 2, lines 11-13). Gottlieb proposes modifying a CPU architecture by adding a banked shadow register block 32 to help with the context switching (col. 4, lines 19+). The shadow bank register block 32 purportedly minimizes thread switch overhead (col. 4, lines 15-18).

Gottlieb does not offer a solution to the problem and constraints faced by the applicants, nor does Gottlieb teach or suggest the features of claim 1. Gottlieb does not work with an existing CPU architecture. Instead, Gottlieb modifies the CPU architecture by adding registers.

Nevertheless, the claims have been amended, not in response to the '102 rejection, but for expediency. The amendments are being made to place the application in condition for allowance.

The amendments were made following a telephonic interview on July 2, 2008 between applicant's attorney Hugh Gortler and Examiner Lillian Vo. Examiner Vo indicated that base claims 1, 12 and 22 would be allowed if amended to include the subject matter of claim 9. Examiner Vo indicated that base claim 11 would be allowed if amended to add the subject matter of claim 9, and if amended to recite using at least one privileged register "at the virtual machine."

Claim 1 has been amended to recite "thereafter restoring the context using an inconsequential register"; claim 9 has been cancelled; and claim 10 has been amended to depend from claim 1. The amendment to claim 1 does not incorporate all of claim 9. However, it is a compromise.

Base claims 12 and 22 have also been amended to recite that context is restored "using an inconsequential register." Claim 20 has been amended to depend properly from claim 12.

Claim 11 has been amended to recite "restoring the context using an inconsequential register." Claim 12 has NOT been amended to recite "using at least one privileged register at the virtual machine" since it appears to be redundant in view of the last feature of claim 12: "the virtual machine application controlling the context switch."

During the telephonic interview, Examiner Vo also mentioned a '101 rejection of claim 22, and a '112 rejection of claim 20. The '101 rejection has been overcome by amending claim 22 to recite "An article comprising computer

memory encoded with instructions.” The ‘112 issue has been overcome by amending claim 20 to recite a “virtual machine application.”

On July 22, 2008, Examiner Vo left another message on the voicemail of applicants’ attorney Hugh Gortler. In her July 22nd message, Examiner Vo said that a new patent was revealed (U.S. Patent No. 6,466,962), but the amendments above would make claim 1 allowable over the ‘962 patent. The undersigned respectfully disagrees that the amendments above were needed to distinguish the claims over the ‘962 patent. The ‘962 patent relates to a computer system that runs a real-time operating system that is co-resident with a commercial operating system. The ‘962 patent is silent about saving context under software control using an inconsequential register. The ‘962 patent discloses that interrupts are disabled, but only to prevent a commercial operating system from interfering with the operation of a real-time operating system. The examiner cited cols. 10 and 11 of the ‘962 patent. However, these columns merely disclose the partitioning of data structures (IVT, GDT and TSS), and performance issues affecting an i486 CPU.

Original claim 12 and previously presented claims 1, 11 and 22 should be allowable over the ‘962 patent. Nevertheless, as stated above, the amendments are being made for expediency.

According to the Examiner’s Interview Summary dated 29 July 2008, the amendments above will place the application in condition for allowance.

Examiner Vo is encouraged to contact the undersigned to discuss any issues that might remain.

Respectfully submitted,

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